

*a Const. Value  
0.12 0.05 Vm*

13DV-13190  
PATENT

*B*  
if an absolute value of the difference between a current value of the summed voltage value and the reference value exceeds a freeze threshold, then maintaining the reference value constant.

*B2*  
6. (twice amended) Apparatus for detecting faults in a transducer including a secondary winding having at least two voltage outputs, the transducer being electrically connected to a logic circuit implemented in at least one of an on-board interface and an on-board controller, said apparatus comprising:

a short term filter for generating a first voltage value representative of a current value of a sum of the secondary winding output voltages;

a long term filter for generating a second voltage value representative of a non-faulted value of a sum of the secondary winding output voltages; at least one of said short term filter and said long term filter configured to maintain said second voltage value constant; and

a summer for generating a difference signal representative of a difference between the first voltage value and the second voltage value.

*B3*  
15. (once amended) Apparatus for detecting faults in a transducer including a secondary winding having at least two voltage outputs, the transducer being electrically connected to a logic circuit implemented in at least one of an on-board interface and an on-board controller, said apparatus comprising:

a short term filter for generating a first voltage value representative of a current value of a sum of the secondary winding output voltages, said short term filter comprising a one pole lag filter;

a long term filter for generating a second voltage value representative of a non-faulted value of a sum of the secondary winding output voltages, said long term filter comprising a one pole lag filter; and